

REMARKS/ARGUMENTS

Claims 32, 38-42 and 64-95 are pending. By this Amendment, claims 32, 38, 39 and 41 are amended, claims 33-37 and 43-63 are canceled, and claims 64-95 are added. Reconsideration in view of the above amendments and the following remarks are respectfully requested.

In the Office Action, the examiner acknowledges the Information Disclosure Statement filed on August 26, 2009. However, the examiner has not accepted or reviewed one of the documents, namely "Steel and Aluminum – A Comparison of Material Properties, LCIN Recycling", as the examiner indicates that no English translation as included with the citation. However, applicant's August 26, 2009 Preliminary Comments Accompanying the Request for Continued Examination as well as applicant's Confirmation of Telephonic interview filed on September 16, 2009 provided an English language explanation of the citation. Thus, applicants respectfully submit that it was improper for the examiner to disregard this reference.

In any event, applicants have discovered that the first filed document publication from the Swedish Trade Association of the Swedish Steel Industry had some printing errors, apparently due to an improperly installed printer driver. Therefore, a new copy of the publication is attached to this letter. Provided with that publication is a translation of relevant parts of the document. The examiner is requested to return an initialed copy of the attached PTO/SB/08A along with his initials indicating consideration of the reference.

Applicants appreciate the indication that claims 37 through 42 would be allowable if placed in independent form. By this Amendment, claim 32 is amended to include the subject matter of claim 37, as well as intervening claims 36 and 35. In addition, claim 41 has been placed into independent form to include the subject matter of claim 32 as previously presented.

However, claims 32 through 36 and 43-63 were rejected under 35 USC §103(a) over Hung (US 4,889,281). This rejection is respectfully traversed as it may apply to new claims 64-95. Claim 64 is directed to a guide rail of compound type for guiding interaction with a wheel of a unit travelling along the rail, comprising an outer rail made of sheet metal exhibiting the shape of a longitudinal open channel with defined inside and outside, a base rail exhibiting a foot for mounting the rail to a surface, a web extending from the foot supporting a main part, which, in comparison to the web, is thicker and serves as a receptacle for receiving and supporting the outer rail, whereby the outer rail has an outer profile that has been chosen to provide a guiding

interaction with the wheel, the inside of the outer rail and the receptacle section of the base rail exhibit corresponding sections or sections that have been chosen relative to each other so that the outer rail fits onto the receptacle section, wherein the outer rail has a yield point exceeding that of the base rail and wherein both the outer rail and the base rail are fixed adhesively to each other by a weld or glue joint.

Claim 84 is directed to a method of manufacturing a guide rail of compound type for guided interaction with a wheel of a unit travelling along the rail, the method comprising: profile shaping a first sheet metal blank, forming a channel-shaped outer rail with a defined concave inside and a convex outside, the shape of the outside of which is chosen to provide a guided interaction with the wheel, forming a base rail from a second blank exhibiting a foot for fitting the rail to a surface, a web that extends from the foot and supports a main section, which in comparison to the web is thicker and serves as a receptacle of suitable shape to support the outer rail, providing the outer rail with a higher yield point compared to the base rail through hardening, positioning the hardened outer rail on the receptacle formed on the base rail, and adhesively fixing the hardened outer rail on the receptacle formed on the base rail by gluing or welding.

Claims 64 and 84 result in a guide rail that is simple and easy to manufacture and exhibits better properties with regard to both rail resistance and resistance to surface fatigue. It is also desirable to achieve a guide rail possessing a dampening effect and is thereby considerably quieter than currently known rails.

Hung discloses a compound guide rail for guiding interaction with a wheel of a unit travelling along the rail. The guide rail is comprised of an outer rail 1 made of an aluminium alloy and further shaped to exhibit a C or U shaped open channel. The channel extends in the longitudinal direction of the rail. The outer rail is mounted onto an iron base rail 2. The outer rail 1 has outwardly and upwardly extending tabs 11, extending from the web of the outer rail and to act to guide the wheels travelling along the rail. The outer rail 1 also has angled tabs to aid in mounting the outer rail to the lower base rail 2. The outer rail is anchored to the base rail by screws 22, thread through holes 13 on the outer rail and extending into the base rail through holes 21.

The claimed compound guide rail and Hung's compound guide rail are substantially different, also the technique and methods for manufacturing them are substantially different.

Hung does not teach or suggest an outer rail that has a yield point exceeding that of the base rail. (Claims 64 and 84). Hung discloses a compound guide rail having a base rail made of shape iron (col. 2, lines 50-53) and an outer rail made of extruded aluminium alloy (col. 42-45). In the statement of the rejection on pages 3 and 4 of the Office Action, the Examiner does not address the feature in claim 64 and 84 that the outer rail has a yield point exceeding that of the base rail. Examiner reveals that it is well known to one of ordinary skilled in that art that, as supposedly supported by Machinery's Handbook 25th edition (1996) p. 193, aluminium has a yield point exceeding the yield point of iron. According to the Examiner it would therefore have been obvious to one of ordinary skilled in the art to come to the expected result that the outer rail would have a yield point exceeding the yield point of the base rail.

The Examiner's position is clearly untenable for the following reasons:

1. First, Hung does not teach or disclose any information as to the relative yield strengths of the outer rail relative to the base rail. Hung suggests the use of aluminium and iron without specifying the selection of tensile properties, manufacturing process etc. of the specific selected materials. Thus, Hung's aluminium may have the same, higher or lower yield strength compared to iron. However, it is well known for a person skilled in the art that aluminium can have a yield point exceeding the yield point of aluminium, but there is no per se rule that this is always the case. The skilled person is also well aware of the fact that iron on the other hand can have a yield point greater than that of aluminium. Therefore Hung teaches nothing of what is claimed, nor does Hung provide any lead for the skilled person to the present invention.

2. Secondly, Hung teaches to use an extruded aluminium alloy (col. 2. lines 42-45). It is well known to a person of ordinary skilled in the arts that high alloy aluminium having the highest yield points are not suitable for extrusion (see for example D812 – Lindunger et al item 5.3.3. the text in the middle of the page which in English translation reads “With a level of less than 1% of magnesium the aluminium alloy can be extruded with normal press speed with higher content the speed becomes slower”). Therefore, since Hung is concerned with the use of an extruded aluminium alloy Hung teaches the skilled person away from the claimed invention since only low alloy aluminium having relatively low yield points are suitable to be extruded.

3. Hung does not teach or suggest that the outer rail is provided with a higher yield limit compared to the base rail through hardening (claim 84). Method claim 84 includes the step of providing the outer rail with a higher yield limit compared to the base rail through hardening. Since Hung does not specify the tensile properties of the outer rail and base rail, respectively it does not provide a lead for the skilled person to the present invention.

4. Hung does not teach or suggest that the outer rail and the base rail are fixed adhesively relative to each other by gluing or welding (claims 64 and 84).

Claim 64 sets forth a guide rail including an outer rail and a base rail that are fixed adhesively relative to each other by glue joint or by welding. Claim 84 includes the step of adhesively fixing the hardened outer rail on the receptacle formed by the base rail by gluing or welding.

Applicant totally disagrees with the Examiners position that one of ordinary skill in the art would come to the expected result that the outer aluminium would have a yield point exceeding the yield point of the iron base rail by following the teachings in Hung. The Machinery's Handbook 25th edition (1996) p. 193, indicates that aluminium can have a higher yield point than iron. However, the handbook also mentions that aluminium can have a yield point below the yield point of iron. For example the table at the top of page 193 specify the yield point of Aluminium wrought 6061-T6 is 35, which is well below the yield point of steel for castings and structural purposes which is between 40-140.

Hung suggests the use of aluminium and iron but is silent when it comes to the selection of tensile properties of the materials. The circumstance that the skilled person could have come to a result is not the same as the skilled person would have come to the result. Applicant submits that the demonstration of obviousness used by the Examiner is totally unsupported and does not establish a *prima facie* case of obviousness. Hung does not provide any information or lead for the skilled in the art to select the outer rail of aluminium with a yield point exceeding the yield point of the base rail of iron.

If the Examiner continues to argue that Hung leads one of ordinary skilled in the art to select materials having different a yield points in the outer rail and the base rail in accordance with the present invention according to claim 64 and 84, Examiner is respectfully requested in detail to point out where Hung gives the skilled person this specific information.

Further, Hung teaches use of a releasable fastener to attach the outer rail on the base rail (anchoring the base rail by screws 22, thread through holes 13 on the outer rail and extending into the base rail through holes 21). In contrast hereto, claims 64 and 84 produce a permanent bond (gluing, bonding and welding are examples of fasteners which produce non-releasable permanent bonding).

Since Hung teaches the use of releasable fasteners (anchoring the outer rail on the base rail by screws and threaded holes), Hung teaches the skilled person away from the claimed invention.

It is well known for one of ordinary skilled in the art that fasteners that fulfil the function of keeping two or more elements in relative position are of two kinds – those producing a permanent bond and those requiring a releasable or a sliding bond. Adhesives such as gluing, welding, soldering are examples of the first category. Screws nuts and bolts, rivets, retaining rings and claps are examples of the second category.

Applicant disagree that fasteners of the both above mentioned kinds are equivalent. Claims 64 and 84 are clearly and distinctively directed to fasteners of the permanent kind. If the Examiner continues to argue that fasteners are of two kinds – those producing a permanent bond and those requiring a releasable or a sliding bond - are equivalent then he is respectfully requested to submit documentary evidence showing that one of ordinary skilled in the art would seriously consider threaded fasteners such as screw and nut on the one hand and welding or gluing on the other hand as equivalents.

Adhesives give a number of advantages over fasteners of releasable or a sliding bond type among which the following can be mentioned:

- Eliminate harm to paint surfaces.
- Facilitate tight bonds between close fittings.
- Eliminate corrosion
- Eliminate pull-through of elements
- Afford greater design flexibility, and compared to bolted joints and riveted joints, there is less need for machined holes, and additional components.

- Fatigue – There are few, if any, stress concentrations associated with adhesive joints and thus adhesives increase fatigue resistance for more durable products versus releasable or a sliding fasteners.

A clarification of this from the Examiner is respectfully requested for the interest of the Applicant.

In order to further support the fact that one of ordinary skilled in the art does not consider permanent fasteners and non-permanent fasteners as equivalents Applicant files an abstract from the publication TALAT “Definition and Classification of Mechanical Fastening Methods” Issued 1994 of EAA – European Aluminium Association. From page.4, the diagram 4101.01.02 on the middle of the page fasteners are classified in the different categories Detachable; Conditionally Detachable and Undetachable. As shown in the diagram welding and adhesives are categorized as Undetachable while screwing and clamping have been assigned to another category, namely Detachable.

Compound guide rails have been known for almost 100 years and all of them involve arranging a facing strip of wear-resistant material as an outer rail into fixed contact with a main body as a base rail formed of a less expensive material. In later years there has also been a need to provide the known compound guide rails with ability to supply electrical power to vehicles guided along the rail.

(1) Hung Fails to Provide the Requisite Motivation for the combination.

There is no motivation in Hung to modify the compound guide rail since Hung does not describe or suggest anything else but the combination of aluminium and iron in the outer rail and base rail, respectively.

Hung does not mentions or suggest a compound guide rail based on the combination of materials having different a yield points in the outer rail and the base rail combined with the feature that the outer rail and base rail are fixed adhesively to each other by welding or gluing. As such, there is no suggestion or motivation to modify Hung to arrive at the subject matter of claims 64 and 84. Further, since Hung is related to the use of releasable fasteners of the outer rail on the base rail, not permanent adhesively fasteners such as gluing or welding, Hung teaches the skilled person away from the claimed invention.

(2) Hung Fails to teach all of the claimed limitations at least because Hung does not teach the outer rail and base rail are fixed adhesively to each other by gluing or welding.

Hung clearly fails to disclose or suggest the use of materials having different yield points in the outer rail and the base rail.

It can thus be concluded that the skilled person, when starting from the document Hung and being faced with the problem of providing an improved guide rail exhibiting better properties with regard to both wear resistance and resistance to surface fatigue, gleans no teaching or suggestion in the applied prior art to modify the compound guide rail of Hung in the manner which would lead the skilled person to claim 64 or claim 84. Claims 64 and 84 could therefore not have been obvious for the skilled person. Moreover the compound guide rail of Hung suffers from a number of drawbacks (some are mentioned above) solved by the compound guide rail according to claims 64 and 84.

Further, independent claim 84 includes the step of providing the outer rail with a higher yield point compared to the base rail through hardening. This argument was presented in the December 16, 2008 Amendment as well as the May 22, 2009 Amendment After Final Rejection. However, the examiner has failed to respond to the argument.

In addition, the examiner states that claims 43-45 and 48-50 recite method limitations in an apparatus claim. However, applicants respectfully traverse that assertion in the previous Amendments. Clearly the examiner's position is incorrect as claim 44 specifies that the outer rail comprises hardened material, and claim 45 indicates that the hardened material is boron steel. In addition, claim 43 specifies that the outer rail and the base rail respectively comprise different types of material. This is structural in nature. In addition, claim 48 specifies a rollformed in hardened sheet metal. At least the "sheet metal" aspect of the claim is structural in nature. Claim 49 specifies that the base rail comprises a rolled profile. A "profile" is a structural feature, and the term "rolled" is an adjective which limits the type of profile involved. Thus, a "rolled profile" is a structural feature. Similar remarks apply to claim 50.

In view of the above amendments and remarks, Applicants respectfully submit that all the claims are patentable and that the entire application is in condition for allowance.

The Commissioner is hereby authorized to charge any deficiency, or credit any overpayment, in the fee(s) filed, or asserted to be filed, or which should have been filed herewith

SUNDGREN
Appl. No. 10/583,117
February 19, 2010


(or with any paper hereafter filed in this application by this firm) to our Account No. 14-1140 under Order No. PTB-4448-44.

Should the Examiner believe that anything further is desirable to place the application in better condition for allowance, he is invited to contact the undersigned at the telephone number listed below.

Respectfully submitted,

NIXON & VANDERHYE P.C.

By: _____


Paul T. Bowen
Reg. No. 38,009

PTB:eaw
901 North Glebe Road, 11th Floor
Arlington, VA 22203-1808
Telephone: (703) 816-4000
Facsimile: (703) 816-4100